

Claims

1. A method of making a semiconductor laser module comprising a semiconductor laser element for outputting a laser beam, a condensing lens for condensing the laser beam from the semiconductor laser element, an optical fiber for receiving the condensed laser beam from the condensing lens and a package including a lens fixation end face for fixedly mounting said condensing lens on said package, said method comprising:

a first step of regulating the attitude of said package such that the lens fixation end face of said package in which said semiconductor laser element is mounted will have a predetermined angle relative to a predetermined reference axis;

a second step of placing said condensing lens on the lens fixation end face of said package;

a third step of detecting the inclination of the laser beam passed through said condensing lens relative to said reference axis;

a fourth step of fixing said condensing lens to said lens fixation end face at a position wherein the inclination of the laser beam relative to said reference axis falls within a predetermined range of angle and moving said condensing lens to said position if said inclination is out of the predetermined range of angle, thereby fixing said condensing lens to said lens fixation end face at that position; and

a fifth step of aligning and fixing said optical fiber such that the desired amount of laser beam passed through said fixed condensing lens will optically be coupled with said optical fiber.

2. The method of making a semiconductor laser module as defined in claim 1, further comprising an additional step of fixing a collimation lens for collimating the laser beam from said semiconductor

laser element and delivering the collimated laser beam to said condensing lens.

3. The method of making a semiconductor laser module as defined in claim 1 wherein said third step includes a step of setting first and second reference planes which are perpendicular to said reference axis at two different points spaced apart from said condensing lens with a predetermined spacing in the direction of said reference axis and a step of detecting the inclination of the laser beam passed through said condensing lens relative to said reference axis, based on the positions of bright spots in the laser beam from said semiconductor laser element on said first and second reference planes.

4. The method of making a semiconductor laser module as defined in claim 3 wherein said first and second reference planes are equidistantly set about the focus point of the laser beam formed by said condensing lens.

5. The method of making a semiconductor laser module as defined in claim 3 wherein said first and second reference planes are spaced apart from each other with an equal distance about a focus point of the laser beam.

6. A semiconductor laser module comprising a semiconductor laser element for outputting a laser beam, a condensing lens for condensing the laser beam from the semiconductor laser element, an optical fiber for receiving the condensed laser beam from the condensing lens and a package including a lens fixation end face for fixedly mounting said condensing lens on said package, said package being regulated in attitude such that the lens

fixation end face of said package will be perpendicular to the reference axis, said condensing lens being fixed to the lens fixation end face at a position wherein the inclination of the laser beam relative to said reference axis falls within a predetermined range of angle, and said optical fiber being aligned and fixed such that the desired amount of laser beam passed through said fixed condensing lens will optically be coupled with said optical fiber.

7. The semiconductor laser module as defined in claim 6, further comprising a collimation lens for collimating the laser beam from said semiconductor laser element and delivering the collimated laser beam to said condensing lens.